

### **REMARKS**

Claims 1, 2, 5, 11, 13-15, 17, 23, 24, 27, 33, 35-37, and 39 have been amended and claims 43-44 have been canceled without intending to abandon or to dedicate to the public any patentable subject matter. Claims 1-21 and 23-42 are currently pending.

Applicant would like to thank the Examiner for his indication that claims 5, 6, 15-17, 20, 27, 28, 37-39, and 42 are allowable. Claims 5, 15, 27, and 37 have been amended into independent format. Accordingly, these claims appear to be allowable and such disposition is respectfully requested.

### **Claim Objections**

Claims 5, 14, 17, 27, 36, and 39 was objected to for containing certain informalities. The identified informalities have been corrected by these amendments. Accordingly, Applicant respectfully requests that the objection of these claims be reconsidered and withdrawn.

### **Rejections under 35 U.S.C. § 112**

Claim 43 was rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Although this claim has been canceled, Applicant would like to point out that claim 43 was, in fact, supported by the specification as filed. More specifically, the sentence which followed the sentence quoted by the Examiner in his last Office Action clarified that traffic is to be redirected to the cheaper link when link utilization thereof is less than a threshold value. The typographical error noted by the Examiner was actually corrected by an amendment to the specification in the Amendment and Response filed on September 9, 2008.

### **Rejections under 35 U.S.C. § 103**

The Examiner rejected claims 1-4, 7-9, 12, 18-21, 23-26, 29-31, 34, 40 and 41 under 35 U.S.C. § 103(a) as being unpatentable over Shaffer, et al., (US 7,023,839) in view of Graham, et al., (US 6,097,722) and further in view of Johnsson (US 2002/0006131) and claims 10, 11, 32, and 33 under 35 U.S.C. § 103(a) as being unpatentable over Shaffer, et al., in view of Graham and Johnson as applied to claims 1 and 23 above and further in view of Ho, et al. (US 6,452,922)

and claims 13 and 35 under 35 U.S.C. § 103(a) as being unpatentable over Shaffer, et al., in view of Graham and Johnson as applied to claims 1 and 23 above and further in view of Lachman, III et al (2002/0166063) and claims 14 and 36 under 35 U.S.C. § 103(a) as being unpatentable over Shaffer, et al., in view of Graham and Johnson as applied to claims 13 and 35 above and further in view of Garg, et al. (2004/0008627). Claims 43 and 44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Singh, et al. (US 2003/0088698) in view of Garg; however, these claims have been canceled in an attempt to expedite allowance of claims 1-21 and 23-42, thereby rendering such rejections moot.

Applicant respectfully traverses the Examiner's rejections. The cited references fail to teach or suggest at least the following italicized limitations of independent claims 1 and 23:

1. A method for performing call admission control, comprising:
  - (a) *determining at least one of (i) a bandwidth utilization level for a first Wide Area Network (WAN) path including a first WAN link, and (ii) an available bandwidth level for the first WAN path and one or more Quality of Service or QoS metrics for the first WAN path;*
  - (b) comparing the determined at least one bandwidth level *and* the one or more QoS metrics to one or more selected thresholds to determine whether a new live voice communication may be set up with a first selected codec;
  - (c) determining that the new live voice communication may not be set up with the first selected codec and in response to determining that the new live voice communication may not be set up with the first selected codec performing at least one of the following steps:
    - (i) selecting a second different codec from among a plurality of possible codecs for the new live voice communication, wherein the second codec has a lower bit rate than the first codec;
    - (ii) *changing an existing live voice communication on the first WAN path from the first codec to the second codec; and*
    - (iii) *redirecting the new live voice communication from the first WAN path to a second different WAN path, wherein the second WAN path does not include the first WAN link.*
23. A call admission controller, comprising:
  - a processor operable to:
    - (a) *determine at least one of (i) a bandwidth utilization level for a first WAN path including a first WAN ink, and (ii) an available bandwidth level for the first WAN path, and one or more Quality of Service or QoS metrics for the first WAN path;*
    - (b) compare the determined at least one bandwidth level *and* the one or more QoS metrics to one or more selected thresholds to determine whether a new live voice communication may be set up with a first selected codec; and

(c) determine that the new live voice communication may not be set up with the first selected codec and in response to determining that the new live voice communication may not be set up with the first selected codec performing at least one of the following operations:

(i) select a second different codec from among a plurality of possible codecs for the new live voice communication, wherein the second codec has a lower bit rate than the first codec;

(ii) *change an existing live voice communication on the first WAN path from the first codec to the second codec; and*

(iii) *redirect the new live voice communication from the first WAN path to a second different WAN path, wherein the second WAN path does not include the first WAN link.*

#### Shaffer

Shaffer is directed toward a system and method for dynamic codec alteration in a Local Area Network (LAN). As previously discussed, Shaffer discusses determining an overall utilization of resources in the entire LAN and then determines which coding algorithms should be used globally within the entire LAN. Accordingly, it is apparent that Shaffer does not discuss determining utilization information for a WAN link or WAN path in connection with performing call admission control and, therefore, appears to be inapplicable to the present invention.

#### Graham

Graham does not overcome these shortcomings of Shaffer. Rather, Graham discloses a system control module that is centralized for a first and second asynchronous transfer mode (ATM) switches for use in a virtual private network (VPN). The physical interface has a corresponding utilization level. The control module described in Graham analyzes the utilization a network to determine if a virtual channel (within a virtual path) can be used to create a virtual connection. If the network is not in an overload condition and the control module does not otherwise allow (or object to) the creation of the virtual connection, the control module may allow the virtual connection to be set up in unspecified capacity of the network. The module can instruct the bandwidth manager module to adjust dynamically the size of each virtual path, virtual channel, and virtual path group. Resizing may include creation and destruction of virtual channels to make room for the requested virtual channel. Graham only deals with virtual channels within a common virtual path. Graham does not accommodate switching between WAN paths, each having different WAN links nor does Graham determine bandwidth utilization level for a first WAN path including a first WAN link and/or an available bandwidth level for the

first WAN path as well as one or more QoS metrics for the first WAN path. Accordingly, Applicant respectfully asserts that Graham fails to teach determining the above-identified measures/characteristics for a particular WAN path including a particular WAN link.

Johnsson

While admitting that neither Shaffer nor Graham disclose comparing bandwidth measure(s) and QoS characteristic(s), the Examiner cited Johnsson for this teaching. Johnsson is directed to the division of a cellular network into resource domains, with each domain being provided with a prediction connection admission control unit. The unit includes information about available resources through its own resource domain as well as information about available resources for connections through other resource domains. Admission control is performed using a protocol similar to RSVP. At paragraphs [0024] and [0030], Johnsson teaches the consideration of whether both bandwidth requirements and QoS can be met before agreeing to reserve resources. Applicant respectfully submits that Johnsson does not overcome the shortcomings of Shaffer or Graham, particularly because Johnsson does not address determining bandwidth utilization level for a first WAN path including a first WAN link and/or an available bandwidth level for the first WAN path as well as one or more QoS metrics for the first WAN path.

Additionally, Applicant still respectfully disagrees with the Examiner's application of Johnsson as prior art. MPEP 2143.01 provides that if an Examiner's proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984). Therefore, regardless of whether the Examiner believes Applicant is making a piecemeal analysis of the prior art, it is still improper to modify a prior art reference such that the prior art becomes unsatisfactory for its intended purpose. As previously stated, by teaching that both bandwidth requirements and QoS must be met before agreeing to reserve resources, Johnsson teaches away from the claimed invention's use of *both* collected QoS characteristics (or network state) and bandwidth measures *in selecting a proper codec*. *According to Johnsson, the failure of the bandwidth measures and QoS characteristics to satisfy selected threshold would bar selection of a codec and not lead to selection of a different codec*. If Johnsson were modified according to the Examiner's suggestion, Johnsson would not operate as intended.

The other cited prior art references do not overcome the shortcomings of Shaffer, Graham, and/or Johnsson. More specifically, none of the cited prior art teaches determining bandwidth utilization level for a first WAN path including a first WAN link and/or an available bandwidth level for the first WAN path as well as one or more QoS metrics for the first WAN path. Accordingly, Applicant respectfully requests the rejections of the independent claims be reconsidered and withdrawn.

The dependent claims provide added reasons for allowance.

By way of example, dependent claims 3 and 25 require each of a plurality of codecs to have a corresponding bit rate and/or required wherein each of a plurality of codecs has a corresponding bit rate and/or required utilization threshold and the selecting step comprises:

comparing at least one of the available bandwidth level and the bandwidth utilization level with the plurality of bit rates and/or utilization thresholds; and

selecting the highest quality codec having a corresponding bit rate and/or utilization level permitted by the at least one of the available bandwidth level and the bandwidth utilization level.

Dependent claims 11 and 33 require that the first link correspond to a first set of port numbers and the second link to a second set of port numbers, the first and second sets of port numbers to be non-overlapping, packets addressed to one of the first set of port numbers to be directed along the first link and packets addressed to one of the second set of port numbers to be directed along the second link and wherein the redirecting step/operation comprises:

selecting for the packetized live voice communication a port address from the first set of port numbers when a new live voice communication can be set up with the first selected codec and

selecting for the packetized live voice communication a port address from the second set of port numbers when a new live voice communication cannot be set up with the first selected codec.

Based on the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

SHERIDAN ROSS P.C.

Date: March 20, 2009

By: /Matthew R. Ellsworth/  
Matthew R. Ellsworth  
Reg. No. 56,345  
1560 Broadway, Suite 1200  
Denver, Colorado 80202  
Telephone: 303-863-9700